

## **ABSTRACT OF THE DISCLOSURE**

A heat transfer device having a heat source for collecting waste heat from a heat-generating system, the heat transfer device having fins in which the shape of the sides of the

fins is preferably circular according to the general expression  $\left(x - \frac{1}{\gamma}\right)^2 + \left(y - \frac{\rho}{\gamma}\right)^2 = \frac{1}{\gamma^2}$ ,

where  $\gamma = \frac{h}{k}$ ,  $h$  is the heat transfer coefficient between the fin and the surrounding fluid,  $k$  is

the thermal conductivity of the fin material,  $\rho = \frac{q_o}{k\theta_o}$ ,  $q_o$  is the heat flow through the fin

semi-base per unit depth and  $\theta_o$  is the difference between the temperatures of the heated surface and the surrounding fluid.